Environmental Health

An estimated 25 percent of preventable illnesses worldwide can be attributed to poor environmental quality. In the United States, air pollution alone is estimated to be associated with 50,000 premature deaths and an estimated $40 billion to $50 billion in health-related costs annually. Two indicators of air quality are ozone (outdoor) and environmental tobacco smoke (indoor).

In 1997, approximately 43 percent of the U.S. population lived in areas designated as nonattainment areas for established health-based standards for ozone. During the years 1988 to 1994, 65 percent of nonsmokers were exposed to environmental tobacco smoke (ETS). Poor air quality contributes to respiratory illness, cardiovascular disease, and cancer. For example, asthma can be triggered or worsened by exposure to ozone and ETS. The overall death rate from asthma increased 57 percent between 1980 and 1993, and for children it increased 67 percent.

Dramatic improvements in air quality in the United States have occurred over the past three decades. Between 1970 and 1997, total emissions of the six principal air pollutants decreased 31 percent. Still, millions of tons of toxic pollutants are released into the air each year from automobiles, industry, and other sources. In 1997, despite continued improvements in air quality, approximately 120 million people lived in areas with unhealthy air based on established standards for one or more commonly found air pollutants, including ozone.

In Arizona, progress has been made in the ozone level but failure to meet the EPA attainment standards for particulate matter is thought to contribute to morbidity and mortality due to Asthma and other respiratory illnesses, especially in the Phoenix metro area. Many public and private efforts are currently underway to achieve PM attainment well before the end of this decade.

Childhood lead poisoning is a significant environmental health problem, yet it is entirely preventable. Lead poisoning prevents children from reaching their full potential. Children, ages six years old and younger, are particularly susceptible to lead poisoning. Lead exposure prevention is key to ensure declining blood lead levels. Ingestion of lead, through hand-to-mouth behavior, is the primary pathway of exposure. The most frequently identified lead sources are lead-based paint and lead-based paint contaminated dust and soil. Lead-containing home remedies and imported pottery are

important sources of lead exposure in Arizona. These sources have caused the most severe cases of lead poisoning documented in the state.

Foodborne illness imposes a burden on public health and contributes significantly to the cost of health care. When unreported cases are taken into account, an estimated 76 million illnesses, 325,000 hospitalizations and 5,000 deaths each year may be associated with microorganisms in food. Reducing risk factors in food handling addresses three public food sources, institutions, restaurants and retail, and can significantly reduce exposure to this type of illness.

Exposure to ETS, or secondhand smoke, among nonsmokers is widespread. Home and workplace environments are major sources of exposure. Nationally, a total of 15 million children are estimated to have been exposed to secondhand smoke in their homes in 1996. ETS increases the risk of heart disease and respiratory infections in children and is responsible for an estimated 3,000 cancer deaths of adult nonsmokers. Efforts to decrease exposure by passing ordinances that ban smoking in public places have been successful in several Arizona communities and are gaining public acceptance.

Melanomas and other skin cancers were expected to claim the lives of 9,200 persons nationwide in 1999. Many skin cancers can be prevented by limiting exposure to the sun, by wearing protective clothing and by using sunscreen. In Arizona, where risk is so much geater than other parts of the US, it is critical that children be protected from sun exposure and that they develop a lifelong habit of prevention.

Objective #1 **Ensure that all air in Arizona achieves United States Environmental Protection Agency (USEPA) attainment status for criteria air pollutants by 2010. This specifically includes particulate matter and ozone.**

Strategy 1.1 Implement all current federally mandated particulate matter control measures.

Strategy 1.2 Implement all recommendations of the 2000 Brown Cloud Summit Task Force.

Objective #2 **Reduce severe lead poisoning (Pb > 20 ug/dL) 75% by 2010. Reduce the prevalence of lead poisoning (Pb > 10 ug/dL) in Arizona by 50% by 2010.**

Strategy 2.1 Screen (by 2005) 100% of AHCCCS-eligible high risk children.

Strategy 2.2 Implement a lead-based pottery and folk medicine campaign in high risk zip codes.

Strategy 2.3 Continue current registry program, investigate cases and make appropriate intervention referrals.

Objective #3 Reduce the prevalence of food borne illnesses in Arizona by reducing risk factors for food borne illness in restaurants and retail food establishments 25% by 2010.

Strategy 3.1 Adopt and implement (by 2001) a new food code in Arizona based on the Food and Drug Administration Model 1999 Food Code.

Strategy 3.2 Establish (by 2002) Arizona baseline levels of compliance with foodborne illness risk factors using new food code regulations.

Strategy 3.3 Fully implement (by 2004) the new food code rules, including 90% compliance with the requirement that the person in charge of all food establishments demonstrate adequate food safety knowledge.

Strategy 3.4 Complete audits (by 2005) of all 15 county health departments and determine effectiveness of food safety programs.

Objective #4 Improve indoor air quality in Arizona by eliminating environmental tobacco smoke in 100% of public buildings and 80% of semipublic buildings by 2010.

Strategy 4.1 Promote public policy to implement prohibitions on smoking in public and semipublic buildings in AZ municipalities.

Objective #5 Increase the percentage of Arizona children that regularly use effective sun protection by 2010.

Strategy 5.1 Establish Arizona baseline levels of sun protection of children.

Strategy 5.2 Implement an effective media and public service campaign to promote sun protection of children in Arizona.

Strategy 5.3 Implement a sun protection program at municipal pools throughout Arizona.